

ITEM: 11

SUBJECT: City of Rio Vista, Northwest Wastewater Treatment Facility, Solano County

BOARD ACTION: *Consideration of NPDES Permit Renewal (NPDES No. CA0083771)*

BACKGROUND: The Regional Water Quality Control Board, Central Valley Region, (Central Valley Water Board) adopted Waste Discharge Requirements Order R5-2004-0092 (NPDES Permit) on 9 July 2004, for the City of Rio Vista (Discharger) Northwest Wastewater Treatment Facility (Facility) in Solano County. The Facility is owned by the Discharger and is operated by Veolia Water West Operating Services Inc. and consists of fine screening, activated sludge treatment, membrane biological reactors, and ultraviolet light (UV) disinfection. Sludge is dewatered using belt filter press technology followed by drying in solar greenhouses and is stockpiled in one of the solar greenhouses prior to disposal at a regulated Class III landfill or beneficial land application. Tertiary-treated wastewater is discharged to the Sacramento River within the Sacramento-San Joaquin Delta.

The existing NPDES Permit authorizes a major discharge of up to 1.0 million gallons per day (mgd) to the receiving water. The Discharger provides sewerage service for the City of Rio Vista. The Facility serves a population of approximately 3,400 people and the monthly sewer user rate is \$51.60.

A tentative Order was issued for public comment on 18 March 2010 with comments due by 19 April 2010. Minor changes were made to the 18 March 2010 tentative Order based on public comments received. A second tentative Order was issued on 10 June 2010, to allow public comments on the changes, which are due by 12 July 2010. Response to additional comments will be provided at the Board meeting.

During the term of the current NPDES permit the Discharger significantly upgraded the Facility resulting in higher quality effluent. This resulted in the proposed removal of effluent limitations for several constituents. The proposed Order also includes new or more stringent effluent limitations for copper, ammonia, and nitrate plus nitrite.

ISSUES: The Discharger, the United States Environmental Protection Agency, Region IX (USEPA), and the California Sportfishing Protection Alliance (CSPA) submitted public comments on the 18 March 2010 tentative Order by the due date. The major issues discussed in the public comments are summarized below. Further detail on all comments is included in Central Valley Water Board staff Responses to Comments document that is included in the agenda package.

Ultraviolet (UV) Disinfection System Operating Specifications and Monitoring and Reporting Requirements: The Discharger comments the proposed Order imposes turbidity requirements that are more stringent than required in other Central Valley Water Board permits and requests the turbidity specifications be changed with the corresponding requirement to increase the UV dosage. In addition, the Discharger does not have the necessary monitoring equipment to continuously monitor for turbidity and requests time to install the necessary monitoring equipment.

The turbidity and UV dosage specifications were established based on facilities that use membrane filtration, which includes more stringent turbidity specifications, but less stringent UV dosage requirements than for facilities that use conventional filtration. The UV dosage and turbidity specifications are needed to ensure adequate pathogen deactivation. The turbidity specifications have been revised in the 10 June 2010 tentative Order along with a corresponding higher UV dosage requirement. The combined less stringent turbidity requirements and higher UV dosage requirements results in equivalent pathogen deactivation. The proposed Order has also been revised to make the continuous turbidity monitoring requirements effective 120 days after adoption of the permit to allow the Discharger time to complete installation of necessary equipment. This change is reflected in the 10 June 2010 tentative Order.

Dilution Credit for Ammonia and Nitrate plus Nitrite: The Discharger comments that the proposed Order allows for a dilution credit of 20:1 for the discharge. Assimilative capacity is available for ammonia and for nitrate plus nitrite. However, dilution is not applied for ammonia and nitrate plus nitrite.

Due to concerns about ammonia in the Delta and because the Facility is capable of providing full nitrification/denitrification resulting in little or no ammonia, nitrate, and nitrite in the discharge, a dilution credit was not allowed.

Effluent Monitoring Frequency for Total Suspended Solids (TSS): USEPA comments that the Central Valley Water Board should clarify that the proposed Order monitoring frequency for biochemical oxygen demand (BOD) is once per week and TSS is once per month instead of once per week.

The monitoring frequency for TSS has been revised to once per week to coincide with the weekly BOD monitoring. This change is reflected in the 10 June 2010 tentative Order.

Receiving Water Monitoring for Fecal Bacteria: USEPA comments that the Central Valley Water Board should clarify why the proposed Order contains receiving water limitations for fecal bacteria but does not contain receiving water monitoring for fecal bacteria.

The final effluent limits for total coliform organisms prescribed in the proposed Order are more stringent than what would be required to meet the Basin Plan receiving water objectives for fecal coliform. Compliance with the total coliform effluent limitations ensures compliance with the fecal coliform receiving water limits.

Exclusion of Data for RPA: CSPA commented that excluding the 18 December 2002 receiving water data from the reasonable potential analysis (RPA) dataset is contrary to the SIP and Federal Regulations. CSPA comments that it is a critical data point that contains elevated concentrations of several metals and was inappropriately discarded.

The 18 December 2002 sample was taken near the peak of the storm event, which saw the Sacramento River peak at 53,160 cubic feet per second (cfs). Prior to this storm event, the Sacramento River flows were approximately 10,000 cfs. The SIP at Section 1.4.3.1 states that, "the RWQCB shall have discretion to consider if any samples are invalid for use as applicable data due to evidence that the sample has been erroneously reported or the sample is not representative of the ambient receiving water column that will mix with the discharge. For example, the RWQCB shall have discretion to consider samples to be invalid that have been taken during peak flows of significant storm events." Metals criteria are based on dissolved metals, however, the elevated total recoverable metals concentrations during the storm event (e.g., 5-7 times other samples) were likely due to a large sediment load in the river, which will increase the total metals concentration, not the dissolved metals concentration. Therefore, in accordance with the SIP, Central Valley Water Board staff determined that the data was not representative of the ambient receiving water column that will mix with the discharge.

Mgmt. Review \_\_\_\_\_  
Legal Review PEP

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